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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,076	06/17/2004	Den-Jen Hwung	12556-US-PA	4075

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JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER	
NEGRON, WANDA M	
ART UNIT	**PAPER NUMBER**
2622	

NOTIFICATION DATE	DELIVERY MODE
07/17/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USA@JCIPGROUP.COM.TW

Office Action Summary	Application No.	Applicant(s)	
	10/710,076	HWUNG ET AL.	
	Examiner	Art Unit	
	Wanda M. Negrón	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 June 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-3 and 6-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Ausems et al. (US Application Publication No. 2001/0044321 A1), in view of Parulski et al. (US Patent No. 6,292,218 B1), and further in view of Toma et al. (US Patent No. 6,707,498 B1).**

4. Regarding **claims 1 and 2**, Ausems et al. teach a palm-top electronic device for capturing and displaying images for capturing and displaying images, e.g. a PDA with an integrated digital camera (see paragraph [0042]) comprising a display screen (145) for displaying the images captured by a photosensitive chip having a photosensitive area, i.e. an inherent image sensor, wherein the display screen has a rectangular shape with a width-to-height aspect ratio is smaller than 1 (see fig.1d). Ausems et al., however, do not explicitly teach that the photosensitive area is rectangular in shape with a width-to-height aspect ratio smaller than 1.

As disclosed by Parulski et al. in col. 8, lines 1-7, the concept of matching the aspect ratio of the effective area of an image sensor to the aspect ratio of the intended display screen is not novel, and, although costly, is considered to be the easiest way to map the sensor pixels to the display pixels. In addition, the concept of a solid-state imaging device having a width-to-height aspect ratio smaller than 1 is well known in the art, as evidenced by Toma et al. (see col. 9, lines 9-17).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the imaging device of Toma et al. in the palm-top electronic device taught by Ausems et al., while aiming to match their respective aspect ratios, in order to obtain a one-to-one mapping between the image sensor pixels and the display pixels since doing so minimizes the image processing required for image display.

6. Regarding **claim 3**, Ausems et al., as modified by Parulski et al. and Toma et al., disclose the claimed invention except for the photosensitive chip being a CMOS image sensor. It would have been an obvious matter of design choice to use a conventional CMOS sensor since the applicant has not disclosed that using a CMOS image sensor solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a CCD image sensor as disclosed by Ausems et al., as modified by Toma et al..

7. Regarding **claims 6 and 10**, Ausems et al. teach a palm-top electronic device for

capturing and displaying images, e.g. a PDA with an integrated digital camera (see paragraph [0042]) comprising a display screen (145) for displaying the images captured by a photosensitive chip, i.e. an inherent image sensor, wherein the display screen has a rectangular shape with a width-to-height aspect ratio is smaller than 1 (see fig.1d). Ausems et al., however, do not explicitly teach that the display screen is suited for showing the entire image captured by the photosensitive chip and that the entire image is shown fully using the entire display screen.

As disclosed by Parulski et al. in col. 8, lines 1-7, the concept of matching the aspect ratio of the effective area of an image sensor to the aspect ratio of the intended display screen is not novel, and, although costly, is considered to be the easiest way to map the sensor pixels to the display pixels. In addition, the concept of a solid-state imaging device having a width-to-height aspect ratio smaller than 1 is well known in the art, as evidenced by Toma et al. (see col. 9, lines 9-17).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the imaging device of Toma et al. in the palm-top electronic device taught by Ausems et al., while aiming to match their respective aspect ratios, in order to have the display screen suited for fully showing the entire image captured using the entire display screen by having a one-to-one mapping between the image sensor pixels and the display pixels since doing so minimizes the image processing required for image display.

8. Regarding **claim 7**, Ausems et al., as modified by Parulski et al. and Toma et al., disclose that the photosensitive area of the photosensitive chip has a rectangular shape with a width-to-height aspect ratio is smaller than 1 (see Toma et al., pixel field 2 in figure 8).

9. Regarding **claim 8**, Ausems et al., as modified by Parulski et al. and Toma et al., disclose that the width-to-height aspect ratio of the effective area of the image sensor corresponds to the width-to-height aspect ratio of the intended display screen (see Parulski et al., col. 8, lines 1-7).

10. Regarding **claim 9**, Ausems et al., as modified by Parulski et al. and Toma et al., disclose the claimed invention except for the photosensitive chip being a CMOS image sensor. It would have been an obvious matter of design choice to use a conventional CMOS sensor since the applicant has not disclosed that using a CMOS image sensor solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a CCD image sensor as disclosed by Ausems et al., as modified by Toma et al..

11. **Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toma et al. (US Patent No. 6,707,498 B1), and further in view of the Internet publication *CMOS versus CCD & What's It All Mean?. Canon EOS D30 Digital SLR***

Review. Imaging Resource Website, 2000 [retrieved on 2007-06-27]. Retrieved from the Internet: <URL: www.imaging-resource.com/PRODS/D30/D30A4.HTM> **(hereinafter referred to as the Canon review).**

12. Regarding **claim 4**, Toma et al. disclose a photosensitive area, i.e. a pixel field (2), having a rectangular shape with a width-to-height aspect ratio smaller than 1 (see col. 9, lines 9-17). It would have been inherent to have the photosensitive area disposed on a chip, i.e. a substrate. Toma et al., however, do not explicitly disclose that the photosensitive chip has a rectangular shape with a width-to-height aspect ratio smaller than 1.

As evidenced by the Canon review (see first figure on page 4), photosensitive chips are conventionally designed in a rectangular shape, substantially matching the aspect ratio of the photosensitive area.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to design the photosensitive chip in a rectangular shape with a width-to-height aspect ratio substantially similar to its photosensitive area in order to minimize production costs by conforming to conventional processes for manufacturing image sensors chips.

13. Regarding **claim 5**, Toma et al. disclose the claimed invention except for the photosensitive chip being a CMOS image sensor. It would have been an obvious matter of design choice to use either a conventional CMOS sensor or a conventional CCD sensor since the applicant has not disclosed that using a CMOS image sensor

solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a CCD image sensor as disclosed by Toma et al..

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Rostoker (US Patent No. 5,760,834) disclose an electronic camera/display device comprising a solid-state image sensor disposed on an LCD display.
- De Schipper (US Application Publication No. 2002/0030775 A1) discloses an image-sensing display panel comprising a CMOS array disposed on an LCD panel.
- Lim (US Patent No. 5,557,329) discloses a video camera comprising an image pickup rotator for rotating the device alog the lens of the optical axis.
- Ozaki et al. (US Patent No. 6,377,302 B1) disclose an image pickup device comprising a rotary driver to rotate the image sensor according to the posture of the object to be photographed.
- Malloy Desormeaux (US Application Publication No. 2003/0026610 A1) discloses a camera that selectively displays different aspect ratios of the captured image.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda M. Negrón whose telephone number is (571) 270-1129. The examiner can normally be reached on Mon-Fri 6:30 am - 4:00 pm alternate Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wanda M. Negrón/
Examiner, Art Unit 2622
June 28, 2007

DAVID OMETZ
SUPERVISORY PATENT EXAMINER